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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/553,578	10/17/2005	Kohji Hosokawa	JP920030016US1	4046
24241 7590 05/01/2007 IBM MICROELECTRONICS INTELLECTUAL PROPERTY LAW 1000 RIVER STREET 972 E ESSEX JUNCTION, VT 05452			EXAMINER YOHA, CONNIE C	
			ART UNIT 2827	PAPER NUMBER
			MAIL DATE 05/01/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/553,578	Applicant(s) HOSOKAWA ET AL.	
	Examiner Connie C. Yoha	Art Unit 2827	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 and 11-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1, 2, 11 and 12 is/are rejected.
- 7) ☐ Claim(s) 3 and 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.



**CONNIE C. YOHA
PRIMARY EXAMINER**

Attachment(s)

- | | |
|---|--|
| <p>1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</p> <p>2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</p> <p>3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>10/17/05</u>.</p> | <p>4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.</p> <p>5) <input type="checkbox"/> Notice of Informal Patent Application</p> <p>6) <input type="checkbox"/> Other: _____.</p> |
|---|--|

DETAILED ACTION

1. This office acknowledges receipt of the following items from the Applicant:

Papers submitted under 35 U.S.C. 119(a)-(d) have been placed of record in the file.

Information Disclosure Statement (IDS) filed on 10/17/05 was considered.
2. 4-10 are withdrawn from consideration due to the restriction requirement.
3. 1-3 and 11-13 are pending.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Figure 3 of the drawing, applicant only indicated that the fuse circuit is formed on the block refresh control circuit BRCCC which is separate from the row decoder region. Therefore, the limitation of "wherein the fuse circuit is formed on the row decoder" in claim 3 and 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Hagura et al, Pat. No. 6693838.

With regard to claim 1 and 11, Hagura discloses a dynamic semiconductor memory device and method comprising: a memory cell array (fig. 1, 200) including a plurality of memory cells, the memory cell arraying being divided into a plurality of blocks (col. 2, line e34-38); a block decoder (fig. 1, 151) for decoding row address signals and producing block selection signal (fig. 1, DHBE) (col. 5, line 18-26); a refresh cycle control circuit (fig. 1, 152-1) for dividing the block selection signals by preset frequency diving ratios to set refresh cycles for the blocks (col. 7, line 28-col. 8, line 14); and a row decoder (fig. 1, 122) for selecting the blocks in response to the block selection signals (col. 5, line 35-44).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hagura et al, Pat. No. 6693838 in view of Tsujino et al, Pat. No. 6366517.

With regard to claim 2 and 12, Hagura as applied in prior rejection, disclosed all claimed subject matter except wherein the refresh cycle control circuit comprises: a fuse circuit for setting the frequency dividing ratios; and a frequency divider for dividing the block selection signals by frequency dividing ratios set in the fuse circuit. However, Tsujino discloses a memory device having refresh cycle control circuit (fig. 3, 25) comprises: a fuse circuit (fig. 1, 50) for setting the frequency dividing ratios; and a frequency divider (fig. 1, 251) for dividing the block selection signals by frequency dividing ratios set in the fuse circuit (col. 4, line 35-64). Therefore, it would have been obvious for one having an ordinary skill in the art at the time the invention was made to incorporate the fuse circuit of Tsujino's into Hagura's to use for setting the frequency dividing ratios to adjust the refresh cycles used in the refresh operation of which would minimize space occupancy and thus, reduce cost in terms of circuitry.

Allowable Subject Matter

7. Claim 3 and 13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent and to overcome the objection set forth above.

The prior art of record does not show the limitation of **the fuse circuit** for setting the frequency dividing ratio used by the frequency divider **is formed on the row decoder**.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Chen Hsu et al (6483764), Feurle et al (6751145) and Kitade (6327208) disclose a memory device having refresh operation.

9. When responding to the office action, Applicants' are advised to provide the examiner with the line numbers and page numbers in the application and/or references cited to assist the examiner to locate the appropriate paragraphs.

10. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) day from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see MPEP 710.02 (b)).

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to whose telephone number is (571) 272-1799. The examiner can normally be reached on Mon. - Fri. from 8:00 A.M. to 5:30 PM. The examiner's supervisor, Amir Zarabian, can be reached at (571) 272-1852. The fax phone number for this Group is (571) 273-8300.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov> should you have questions on access to the Private Pair system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2827



C. Yoha

April 2007



Connie C. Yoha

Art Unit 2827

CONNIE C. YOH
PRIMARY EXAMINER